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ABSTRACT

Three commonly used means of assessment of student achievement are discussed. First, standardized tests are often used to assess student achievement. These tests are developed by professional testing and measurement specialists who are completely removed from the local student and classroom. There are many objections to the use of standardized tests, among which are questions of validity and the fact that they measure achievement at only one time. Second, criterion-referenced tests (CRTs) have a major advantage over other standardized tests because they have objectives teachers can use to gauge their teaching. The alignment of the objectives with the test items on the CRT can make for quality validity. A constructivist approach to assessment emphasizes that students construct their own ideas in ongoing learning activities. Advocates of a constructivist approach assess learner achievement within an ongoing lesson or unit of study. Third, portfolio assessment usually goes along with the constructivist philosophy. A valid and reliable approach to assessment is suggested that relies on portfolios and a constructivist philosophy, with minimal use of CRTs and standardized tests. The use of checklists and rating scales, self-appraisal by students, and teacher evaluation of the student in essay form will all enhance the assessment approach. (SLD)

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Assessment of Student Achievement and the Curriculum

Marlow Ediger

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ASSESSMENT OF STUDENT ACHIEVEMENT AND THE CURRICULUM

Assessment of student achievement is a major item of concern to educators. How do we show and reveal what students have learned? There is much disagreement on methodology, such as using

1. standardized tests
2. criterion referenced tests (CRTs)
3. portfolios.

These three procedures will be discussed with comparisons made. It is important to make comparisons in order to inform as well as come up with some kind of agreement in terms of how students should be appraised.

Using Standardized Tests

Standardized tests seemingly are quite popular in use to ascertain learner achievement. These tests are developed by professional testing and measurement specialists who are completely removed in distance from the local teacher, students, and classroom. Standardized test writers have no knowledge of students who will be taking their test. Thus, it becomes difficult to know which items to place on a test. Validity thus becomes a problem. The test writers then have no knowledge of what has been taught to students previously. The manual section of a standardized test tends to state, however, how content validity was determined. Reliability is easier to determine in achieving consistency of student results from testing, be it split-half, test-retest, or alternative forms reliability. Standardized tests go through pilot studies whereby weak test items are taken out. The following will be omitted from the final test:

1. where everybody misses the same test item or
2. where everyone taking the test responds correctly to a multiple choice item.

Test writers tend to write items based on pilot study results which spread students out in results from high to low. Thus, students are ideally to be spread out from the 99th to the first percentile. Most classrooms will not reveal this great a spread of test results, but the spread will be there. The fiftieth percentile is usually the average for all who took the test.

"Standardized" means that all receive the same directions for taking the test, all are given the same amount of time for test taking according to the written directions for administration, all will be scored with the same key, and all will be compared with the norms developed from pilot students made of the involved test. If any of these rules are violated, the test results then are not valid Student results given from

having taken the test may include a percentile, grade equivalent, standard deviation, quartile deviation, and/or a stanine. The most common numeral to show a student's results is the percentile. It seemingly is the easiest to understand by those involved in viewing the test results. A single numeral then provides data on how well a student is doing in school (Ediger, 2000, 169-176).

Criticisms in using standardized tests to provide assessment results on a student are the following:

1. a single numeral cannot provide adequate information a a student's progress.
2. these tests are given once a year at the most; assessment should be ongoing and continuous.
3. they lack validity and do not cover adequately what has been taught in the classroom.
4. they do not provide for individual differences in that selected students need more time than others or need to have directions simplified.
5. they measure verbal intelligence, such as reading skills, and fail to assess other facets of a learner's achievement including the fine arts.
6. they are very impersonal in that the test writers are not connected with test takers in any way possible.
7. they treat students as objects since everything is standardized, whereas learners are individuals with abilities, feelings, values, and attitudes.
8. they provide little or no feedback to students and their teachers pertaining to what was missed and needs attention in teaching.
9. they do not provide opportunities for students to ask for clarification of a test item being responded to.
10. they measure student's acquired factual knowledge since facts are the easiest forms of ideas to measure in terms of certainty (Ediger, 2000, Chapter Nine).

Criterion Referenced Tests (CRTs)

CRTs have a major advantage over standardized tests; they have objectives for teachers to use to gauge their teaching. Thus, the objectives provide guidance on what students are to learn and what they will be tested on. Booth the objectives for teachers and the CRTs are developed on the state level and are mandated for use in the public schools.

CRTS are based on the teacher teaching toward measurably stated objectives. Either a student does or does not achieve a measurably stated objective as a result of instruction. The alignment of the objectives with the test items on the CRT can make for quality validity. A major

problem of state mandated tests are the carefully designed multiple choice test items. If an item is not clearly written or has multiple choice test items which do not indicate a correct response that differentiates adequately from the incorrect distracters, then results from students having taken the test will not provide needed results. The CRT needs to be pilot studied so that poorly written test items may be omitted. CRTS need to do the following to minimize weaknesses in their tests:

1. take adequate time in developing the CRT and the related specific objectives for students to achieve. There should be no hurry in implementing state wide testing programs.
2. take out glitches in test items which may confuse, lack validity, are hazy, and are poorly edited.
3. take enough time to obtain adequate reliability of the tests be it split half, test-retest, and/or alternate forms.
4. take adequate time to develop a scoring key which is accurate.
5. take time to choose a reputable company to machine score the completed tests of students. Bad glitches having been made by selected companies.
6. take time to study the printouts of students having taken the test. Do certain academic areas show much lower scores than do others? Perhaps, one academic discipline has easier test items to respond to than do the other subject matter areas.
7. take tome to view carefully the item analysis printout from students having taken the test, if this is available. Are there selected test items which are missed by most of the test takers or times which almost all answered correctly? Test items can be written at a highly complex level whereby most fail or they can be written in a very easy manner whereby success in responding is almost guaranteed.
8. take time to study if the results from each student seem plausible. Test writers, computer scoring, and student test results are human endeavors, not objective endeavors.
9. take time to use test results, if available, in teaching. Diagnosis and remediation of what was missed are important.
10. take appropriate time in teaching test taking skills. Avoid overdoing the drill part of learning isolated facts in test taking (See Bracey, 2000).

Constructivism Philosophy in Test Taking

Constructivism emphasizes that students construct their very own ideas in ongoing learning activities. Thus, there is not the objectivity involved in learning which the measurement movement stresses. Knowledge and skills then appear to be more subjective. Constructivist advocate assessing learner achievement within an ongoing lesson or unit of study. The teacher assists students then to assess each product

and process of learning. Whatever has not been attained satisfactorily by the student is then modified or changed within context, not outside the learning opportunity. Students in the classroom are helped to correct deficiencies. External examiners, such as test writers and publishing companies, are not involved in the assessment process. Assessment results are used more to help students achieve and not to rate or make comparisons among students. Each student is assessed in daily school work in terms of what is needed. The teacher may determine the objectives for instruction or teacher/student planning may be used. Portfolios generally go along with constructivist philosophy. In a portfolio, the student and the teacher may plan together what should go into a portfolio for the former to show school achievement. Which artifacts of a student might then go into a portfolio?

1. written work of the student including prose, poetry, expository, narrative, and creative writings.
2. art products as they relate to ongoing lessons and units.What is too large for a portfolio may be included in snapshot form.
3. construction items which assist in achieving the lesson/units objectives.
4. cassette recordings of oral reading, reports, speeches given, and other forms of communicating ideas orally.
5. a video tape showing committee endeavors participated in.
6. dioramas made to show vital facts, concepts, and generalizations having been studied.
7. diagrams, charts, graphs, and drawings of content contained in lessons/units of study.
8. models and objects made relating directly to vital ideas developed in ongoing studies.
9. outlines, summaries, and picture dictionaries made.
10. project methods of study (Ediger, 1999, 280-285).

Questions which may be asked of constructivism and portfolios are the following:

1. will the lay public accept portfolio results as compared to test results with a single digit numeral such s a percentile?
2. Will portfolios become too voluminous for assessors to appraise for the many involved students?
3. will validity be established successfully when rating portfolio contents, directly related to the objectives of the curriculum?
4. will reliability be adequate when several assessors are doing the evaluation of each portfolio? Interrater and interscorer reliability are important when appraising portfolios.
5. will increase reliability occur when well developed rubrics are used in the assessment process? (Ediger, 2000, 233-240)

The Ideal in Assessment

The author here will present a plan of assessing student achievement in which his ideal is stated. Well educated teachers will establish the objectives for student achievement. These may be developed within a school committee system. Each objective is carefully considered and assessed prior to its use in the curriculum. The objectives can be adapted to each student on order to be developmentally appropriate. Learning activities are varied sot that learners individually are assisted to attain the ends of instruction. Variety in learning opportunities is emphasized so that the learning styles and intelligences of students individual are being met. Competent teachers are able to teach students so that each will learn as much as possible of what is vital. The vital learnings will include subject matter, skills, and attitudes. The learning opportunities are aligned with the stated objectives. There is leeway, however, for student input into curriculum development. Evaluation procedures used are to ascertain what students have learned. Again, a variety of approaches need to be used here. Why? No procedure is perfect. The following valid and reliable assessment procedures may be used to ascertain student achievement:

1. portfolios and constructivist philosophy.
2. minimal use of CRTs and standardized tests. When used the test results provide feedback to the teacher and students so that the curriculum may be improved. Money saved from testing may be used for new and remodeled school buildings as well as teaching supplies and materials
3. checklists and rating scales. The results will not be objective, but neither are CRTS and standardized test results. Each approach used, developed by human beings, is subjective and has its weak points. Weaknesses need to be diagnosed and taken out of any assessment procedure.
4. self appraisal by the involved student using quality criteria.
5. teacher evaluation of the student in essay form.

Each assessment procedure should provide feedback on how to improve the curriculum. There are numerous strengths in my ideal plan of teacher accountability:

1. curricular decisions are made by those involved directly in classroom teaching.
2. curricular decisions are made by those who experience and know the learner's strengths and weaknesses.
3. curricular decisions are free of threats to teachers and students. These threats are school bankruptcy laws, merit pay, vouchers, and commercial education for pay, among others.

4. curricular decisions in assessment provide feedback in order to improve sequence in student learning.

5. curricular decisions are made to improve teaching and learning, not to give false impressions to others.

Assessment procedures used presently have much leeway available for modification, change, and use. The quality of objectives for student achievement, the learning opportunities to achieve the chosen ends, and the evaluation procedures used to determine learner progress, need to be assessed continuously to offer students the best curriculum possible. Each student needs to learn as much as possible and achieve optimally.

References

Bracey, Gerald (2000), Phi Delta Kappan. Each issue has a fascinating column by this writer, generally refuting negative achievement remarks about public school students and academic achievement. His remarks are research based.

Ediger, Marlow (2000), "Measurement/Evaluation Courses in Teacher Education," Education, 121 (1), 169-176.

Ediger, Marlow (2000), Teaching Mathematics Successfully, New Delhi, India; Discovery Publishing House, Chapter Nine.

Ediger, Marlow (1999), "The Pupil in the Rural School," Journal of Instructional Psychology, 26 (4), 280-285.

Ediger, Marlow (2000), "Appraising Learner Progress in the Social Studies," College Student Journal, 233-240.